TABLE OF CONTENTS

			PAGE
RECOR	D OF REVI	SIONS	i
FOREW	ORD		ii
TABLE	OF CONTE	ENTS	iii
SECTIO	ON 1. GE	ENERAL INFORMATION	
Para.	1.1	PURPOSE	1-1
	1.2	BACKGROUND INFORMATION ON A-E PROCUREMENT PRACTICES	1-1
	1.3	DEFINITIONS	1-1
	1.4	SELECTION OF A-Es	1-3
	1.4.1	Background	1-3
	1.4.2	Energy Efficiency/Recycling/Waste Reduction Selection Criteria	1-4
	1.4.3	Contract Award Documents	1-4
	1.5	TYPES OF SERVICES - GENERAL	1-4
	1.5.1	Construction Drawings, Specifications and Cost Estimates	1-4
	1.5.2	Preliminary Plans, Specifications and Cost Estimates	1-4
	1.5.3	1391+/Parametric Cost Estimate (PCE)	1-4
	1.5.4	Engineering Studies	1-4
	1.5.5	Soil Investigation, Test and Reports	1-4
	1.5.6	Topographic and/or Cadastral Surveys	1-4
	1.5.7	Hydrographic Surveys	1-4
	1.5.8	Landscape Design	1-5
	1.5.9	Interior Design	1-5
	1.5.10	Title II Inspection and Surveillance Services	1-5
	1.5.11	System Safety	1-5
	1.5.12	Intrusion Detection System (IDS)	1-5
	1.5.13	Environmental Impact Assessments	1-6
	1.5.14	Value Engineering	1-6
	1.5.15	Master Plans	1-6
	1.5.16	Criteria Preparation	1-6
	1.5.17	Post Construction Award Services (PCAS)	1-6
	1.5.18	Partnering	1-6
	1.5.19	Operation and Maintenance Support Information (OMSI)	1-6
	1.6	TYPES OF A-E AND CONSTRUCTION CONTRACTS	1-7
	1.6.1	Firm Fixed Price (Lump Sum) Contracts	1-7
	1.6.2	Indefinite-Quantity (IQ) Contracts	1-7
	1.6.3	Simplified Acquisition Procedures (SAP)	1-7
	1.6.4	Sole Source Contracts	1-7
	1.6.5	Non-appropriated Funded (NAF) Contracts	1-7

	1.6.5.1	NAF Projects	1-7
	1.6.6	Design/Build	1-7
	1.6.7	Job Order Contract (JOC)	1-8
	1.7	A-E DESIGN/PERFORMANCE AWARDS	1-8
		iii	
	1.7.1	Types of Awards	1-9
	1.7.2	Other Award Programs	1-9
	1.8	A-E PERFORMANCE EVALUATION	1-9
	1.9	A-E LIABILITY	1-10
	1.10	CONSTRUCTION CONTRACTS WITH ARCHITECT-ENGINEER FIRMS	1-10
	1.11	ORGANIZATIONAL CONFLICTS OF INTEREST (FAR SUBPART 9.5)	1-10
	1.12	LONGSHORE AND HARBOR WORKS ACT (LHWA) INSURANCE	1-10
	1.13	PACNAVFACENGCOM CONSULTANTS	1-10
	1.14	TRANSITION TO METRIC	1-11
	1.15	SPECIALIZED CUSTOMER COORDINATION	1-12
	1.15.1	FOSSAC on Supply and Warehouse Facilities	1-12
	1.15.2	BUPERS on Morale, Welfare, and Recreation (MWR) Facilities	1-12
	1.15.3	Navy Food Service Systems Office (NAVFSSO) on Dining Facilities	1-12
	1.15.4	MFDO on Medical Facilities Design	1-13
	Attach.	PACNAVFACENGCOM Geographic Area of Responsibility Map	
	Attach.	PACNAVFACENGCOM Organization Chart	
	Attach.	Information Required for Review of Facility Designs	
		(for x-ray system)	
SECTI	ON 2. GEI	NERAL PERFORMANCE REQUIREMENTS	
Para.	2.1	GENERAL	2-1
	2.2	RESPONSIBILITY	2-1
	2.2.1	A-E Communications with Government	2-1
	2.2.2	Meeting Cost Limitation	2-1
	2.2.3	Accuracy and Coordination of Work	2-1
	2.2.4	Correction of Deficiencies in Design	2-2
	2.2.5	Appropriate Disciplines Use	2-2
	2.2.6	Cross Discipline Work	2-2
	2.2.7	Specialty Consultants	2-2
	2.2.7.1	General	2-2
	2.2.7.2	Geotechnical Work	2-2
	2.2.7.3	Changes After A-E Contract Award	2-2
	2.2.8	Testing Laboratories	2-2
	2.2.8.1	Testing Laboratory Requirements	2-2
	2.2.8.2	Accredited Laboratories	2-3
	2.2.8.3	Inspection of Testing Laboratories	2-3
	2.2.8.4	Capability Check	2-3
	2.3	STATEMENT OF ARCHITECT-ENGINEER SERVICES	2-3

	2.3.1	Precedence	2-4
	2.3.2	Scope Changes	2-4
	2.3.2.1	A-E Proposed Changes	2-4
	2.4	AUTHORIZATION TO PROCEED	2-4
	2.4.1	Authorized Contracting Officers	2-4
	2.4.2	Contracting Officer's Technical Representative	2-4
	2.5	SECURITY CLEARANCES	2-5
	2.5.1	Gate Passes	2-5
	2.5.2	Photography	2-5
	2.5.3	Clearances for Handling of Classified	2-5
		Material	
		iv	
	2.5.4	Area Clearances	2-5
	2.6	A-E RELEASE OF INFORMATION	2-5
		CONTACTS	2-5
	2.7.1	Contacts with Government Activities	2-5
	2.7.2	Contacts with Public Utilities and Private	2-6
	,,,	Property Owners	
	2.7.2.1	Authorized Contacts	2-6
	2.7.3	Total Quality Leadership	2-6
	2.8	CONFERENCES	2-6
	2.8.1	Station Conferences and Site Inspections	2-6
	2.9	AVAILABLE INFORMATION	2-6
	2.9.1	A-E Verification of Available Information	2-7
	2.9.2	Copies of Information	2-7
	2.10	PERMITS	2-7
	2.10.1	Revised Hawaii Administrative Rules (HAR)	2-8
	2.11		2-8
	2.11.1	MCON Projects	2-8
	2.11.1.1		2-8
	2.11.2	Projects Other Than MCON	2-8
	2.12	CONTRACTOR'S RELEASE	2-9
SECTIO	ON 3. DES	SIGN SUBMITTALS AND REVIEWS	
Para.	3.1	SUBMITTALS	3-1
	3.1.1	Schedule for Submittals	3-1
	3.1.2	Pre-Design Meeting	3-1
	3.1.2.1	Functional Analysis Concept Development (FACD)	3-1
	3.1.3	Value Engineering (VE)	3-1
	3.1.4	Concept Submittal	3-2
	3.1.5	60% Submittal (Optional)	3-2
	3.1.6	100% Submittal	3-2
	3.1.7	100% Review Conference	3-3
	3.1.8	Final Submittal	3-3
	3.1.9	Amendments to the Solicitation	3-3
	3.1.10	List of Construction Contractor Submittals	3-4
	3.1.10.1		3-5
	J. T. TU. T	Submitted Hist in Project Specification	5-5

3.1.10.2	Submittal List for PCAS	3-5
3.1.11	Critical Items Summary	3-5
3.1.12	Recommendations on Field Consultation	3-5
3.1.13	Other Submittals	3-6
3.2	PACNAVFACENGCOM DESIGN QUALITY ASSURANCE PROGRAM	3-6
3.2.1	Design Quality Control Plan (DQCP)	3-6
3.2.2	Quality Control Submittals	3-7
3.3	GOVERNMENT REVIEWS	3-7
3.3.1	Reviews	3-7
3.3.2	A-E Action on Review Comments	3-8
3.3.2.1	Submission of Annotated Review Comments	3-8
3.3.2.2	Identification of A-E Taking Action on Comments	3-9
3.4	DELIVERY OF SUBMITTALS	3-9
3.4.1	Review Copies	3-9
3.4.2	Originals	3-9

V

SECTION 4. POST CONSTRUCTION AWARD SERVICES (PCAS)

Para.	4.1	GENERAL	4-1
	4.2	A-E COMMUNICATIONS DURING CONSTRUCTION	4-1
	4.2.1	Communication When Partnering is Established	4-1
	4.2.2	Communication When Partnering is Not Established	4-1
	4.2.3	Written Report	4-1
	4.3	PCAS SCOPING MEETING	4-1
	4.4	TYPES OF SERVICES	4-2
	4.4.1	Review of Submittals	4-2
	4.4.1.1	ROICC Action	4-2
	4.4.1.2	A-E Action	4-2
	4.4.2	Operation and Maintenance Manuals	4-3
	4.4.3	On-Site Consultation Services	4-3
	4.4.4	Office Consultation	4-4
	4.4.5	Evaluation of Value Engineering Change	4-4
		Proposals (VECP's)	
	4.4.6	As-Built Drawings	4 - 4
	4.4.6.1	Procedure	4 - 4
	4.4.7	As Built Preparation for CADD-Generated Drawings	4-5
	4.4.7.1	Submittal of As-Built Drawings	4-5
	4.4.8	Preconstruction Conference	4-5
	4.4.9	Designer/ROICC Conference	4-5
	4.4.10	Title II Inspection and Surveillance Services	4-7
	4.4.11	Projects Involving Acquisition of Computer	4-7
		Software and Data	

SECTION 5. BASIS OF DESIGN

Para.	5.1	PURPOSE	5-1
	5.2	BASIC CRITERIA/CONSTRUCTION CRITERIA BASE (CCB)	5-1
	5.2.1	Navy Criteria	5-1
	5.2.1.1	NAVFAC P-1010 Lessons Learned from Design	5-1
		and Engineering of Naval Facilities	
	5.2.1.2	NAVFACENGCOM Lessons Learned	5-1
	5.2.1.3	PACNAVFACENGCOM Value Engineering Bulletin	5-1
	5.2.1.4	Design Manual/Military Handbooks	5-1
	5.2.1.5	Design Policy Letters (DPLs) (Discontinued)	5-1
	5.2.1.6	NAVFAC Criteria Interpretation and Waivers	5-1
	5.2.1.7	Action, Consultation and Engineering	5-1
		Response (ACER) Team Studies	
	5.2.1.8	Value Engineering Database (VEDIS)	5-2
	5.2.2	Air Force (AF) Criteria	5-2
	5.2.2.1	Design for Maintainability	5-2
	5.2.2.2	Interior Design Presentation Format	5-2
	5.2.2.3	Revised Design	5-2
	5.2.3	Army Corps of Engineers REMR Notebook	5-2
	5.2.4	Availability of Criteria Documents	5-2
	5.2.4.1	Construction Criteria Base (CCB)/SPECSINTACT	5-2
	5.2.4.2	Navy Documents	5-2
	5.2.4.3	Other Agency Criteria	5-2
	5.3	APPROPRIATE ARCHITECTURE	5-3
		vi	
	5.4	BASE EXTERIOR ARCHITECTURE PLAN (BEAP)	5-3
	5.5	DESIGN COMPUTATIONS	5-4
	5.6	DESIGN AREA TABULATION	5-4
	5.7	SITE PLANNING	5-4
	5.7.1	National Environmental Policy Act (NEPA)	5-5
		Documentation	
	5.7.2	Environmental Considerations	5-5
	5.7.3	Environmental Policies	5-5
	5.7.3.1	Installation, Restoration (IR) Program	5-5
		and Underground Storage Tank (UST)	
		Program	
	5.7.3.2	Hazardous Substance (HS)	5-5
	5.7.3.3	Restrictions on Class I Ozone Depleting	5-5
		Substances (ODS)	
	5.7.4	Notification of Demolition and Renovation	5-6
	5.7.4.1	Submission of Form	5-6
	5.7.4.2	Definitions	5-7
	5.7.5	Historic Properties and Native Hawaiian Human	5-7
		Remains and Associated Cultural Materials	
	5.7.5.1	NHPA	5-7
	5.7.5.2	NAGPRA	5-7
	5.7.5.2 5.8 5.8.1	NAGPRA SITING Physical Features	5-7 5-7 5-7

5.8.2	Orientation	5-8
5.8.3	Circulation/Traffic Patterns	5-8
5.9	BUILDING DESIGN	5-8
5.9.1	Type of Construction Adopted	5-8
5.9.2	Previous Design Utilization	5-8
5.9.2.1	Site Adaptation of Standard or Working	5-8
	Drawings	
5.10	SUSTAINABILITY	5-8
5.10.1	Sustainability	5-8
5.10.2	Sustainable Design Summary, Checklist and	
	Case Study	5-10
5.10.3	Energy Conservation	5-10
5.10.4	Energy Saving Features	5-11
5.10.5	Techniques	5-11
5.10.6	Energy Guidelines	5-11
5.10.7	Computer Energy Analysis	5-11
5.10.8	Solar Energy Study	5-11
5.10.9	Affirmative Procurement	5-11
5.10.10	Hawaiian Electric Company Inc's Energy Services	5-12
5.11	$\label{thm:matching} \mbox{ HEALTH AND SAFETY; HAZARDOUS MATERIALS (consolidated $ \mbox{w}/ $	5-13
	5.7.3.2)	
5.12	DESIGN FOR THE PHYSICALLY HANDICAPPED	5-13
5.12.1	Architectural Barriers Act	5-14
5.12.2	Randolph-Sheppard Act	5-14
5.13	FIRE PROTECTION	5-14
5.13.1	Hydrant Flow Test	5-14
5.13.2	Hydraulic Calculations	5-14
5.14	ELEVATORS	5-14
5.14.1	Design Requirements	5-14
5.14.2	Elevator Hoistways Fire Protection Requirements	5-14
5.15	WEIGHT HANDLING EQUIPMENT	5-15
	vii	
5.16	CIVIL ENGINEERING	5-15
5.16.1	Site Grading	5-15
5.16.2	Storm Sewer System and Surface Drainage	5-15
5.16.3	Water Supply and Distribution	5-15
5.16.4	Sanitary Sewer and Sewage Treatment Systems	5-16
5.16.5	Utility Piping Design	5-16
5.16.6	Adequacy of Existing Utilities	5-17
5.16.7	Dust and Erosion Control	5-18
5.16.8	Fencing	5-18
5.16.9	Roads and Parking Areas	5-18
5.16.10	Airfield Pavements	5-18
5.16.11	Disposal of Water Containing AAAF Fire	5-18
	Fighting Foam	
5.17	LANDSCAPING AND IRRIGATION SYSTEMS	5-18
5.17.1	Landscaping	5-18
5.17.1.1	Activity Master Plan for Landscaping	5-18

5.17.1.2	Existing Trees and Shrubs	5-19
5.17.1.3	Functionality	5-19
5.17.1.4	Native Plants	5-19
5.17.1.5	Layout	5-19
5.17.1.6	Ease of Maintenance	5-19
5.17.2	Irrigation Systems	5-19
5.17.2.1	Type System	5-19
5.17.2.2	Water Conservation	5-19
5.17.2.3	Residual Pressure	5-19
5.17.2.4	Calculations	5-19
5.17.2.5	Ease of Maintenance	5-19
	ARCHITECTURAL	5-19
5.18.1	Passive Features	5-19
5.18.2		5-20
5.18.3	Sizing of Equipment Rooms	5-20
5.18.4	Exterior Wall Surfaces	5-20
5.18.5	Interior Downspouts	5-20
5.18.6	Roof	5-20
5.18.6.1	Roof Slopes	5-20
5.18.7	Wet Area Floors	5-20
5.18.8	Color and Finish Selections	5-20
5.18.9	Building Systems	5-20
5.18.10	Wall Finish Selections and Vapor Barrier	5-20
	Placement	
5.19	STRUCTURAL	5-21
5.19.1	Structural Engineering (Including Seismic)	5-21
5.19.2	Design Criteria	5-21
5.19.2.1	Seismic Design Policy	5-21
5.19.2.2	Piers and Wharves	5-21
5.19.2.3	Seismic Upgrade	5-21
5.19.3	Wind Design Policy	5-22
5.19.4	Foundation Conditions	5-22
5.19.5	Type of Construction	5-22
5.19.6	Materials	5-22
5.19.7	Special Features	5-22
5.19.8	Structural Floor and Roof System	5-22
5.19.9	Live Loads	5-23
5.19.10	Lateral Forces	5-23
	viii	
5.19.11	Special Considerations	5-23
5.19.12	Calculations	5-23
	MECHANICAL	5-23
5.20.1	<pre>Heating, Ventilating and Air Conditioning (HVAC)</pre>	5-24
5.20.1.1	Solar Energy	5-24
5.20.2	Heating	5-24
5.20.2.1	Electrical Resistance Heating	5-24
5.20.3	Air Conditioning and Ventilation	5-24

5.20.3.1	Air Conditioning	5-24
5.20.3.2	Ventilation	5-24
5.20.3.3	Design Temperatures	5-25
5.20.3.4	Equipment	5-25
5.20.3.5	Design Analysis	5-25
5.20.3.6	Controls	5-25
5.20.4	Plumbing	5-25
5.20.5	Distribution Piping	5-26
5.20.6	Refrigeration (Cold Storage)	5-26
5.20.7	Fuel Storage and Distribution	5-26
5.20.7.1	Fuel-Oil-Fired Plants	5-26
5.20.7.2	Fuel Selection	5-26
5.20.8	Industrial Ventilation	5-26
5.20.9	Utilities	5-26
5.20.10	Tempered Water Supply for Lavatories Located on	5-26
	Navy/Marine Corps Facilities on Oahu	
5.21	ELECTRICAL	5-27
5.21.1	Interior Distribution Systems	5-27
5.21.2	Exterior Distribution Systems	5-27
5.21.2.1	Duct Lines	5-28
5.22	ELECTRONIC SYSTEMS	5-28
5.22.1	System Engineering Concepts	5-28
5.22.2	Equipment to be Utilized	5-28
5.22.3	Communications-Electronics System Basic	5-29
	Requirements	
5.22.4	Telecommunications, Signal, Telemetry Systems	5-29
5.22.4.1	Telephone/Communications Installation	5-30
5.22.4.2	Hawaii Area	5-30
5.22.5	High Altitude Electromagnetic Pulse (HEMP)	5-30
5.22.6	Prewiring	5-30
5.23	CATHODIC PROTECTION	5-30
5.24	UTILITIES	5-31
5.24.1	General	5-31
5.24.2	Utility Connections and Interruptions	5-31
5.24.3	Location of Underground Utilities	5-31
5.24.4	Projects Requiring No Utility Contract Modifications	5-32
5.24.5	Projects Requiring a Contract Modification	5-32
5.24.5.1	Sewer and Water	5-32
5.24.5.2	Telephone	5-32
5.24.5.3	Fuel	5-32
5.24.5.4	Steam	5-32
5.24.5.5	Electric	5-32
5.24.6	Projects Requiring a New Utilities Service	5-32
	Contract	

5.25	PHYSICAL SECURITY AND ANTITERRORISM/FORCE PROTECTION	N 5-32
	(AT/FP)	
5.25.1	General	5-32
5.25.2	Antiterrorism/Force Protection	5-33
5.25.3	Intrusion Detection Systems (IDS)	5-33
5.25.3.1	Identification of IDS Requirements	5-33
5.26	ENGINE GENERATORS	5-33
5.26.1	Engine Generator General Requirements	5-33
5.26.2	Mechanical Consultant	5-33
5.26.3	Required Information	5-33
5.27	ACQUISITION OF COMPUTER SOFTWARE AND DATA	5-34
5.27.1	Compliance with Acquisition Regulations	5-34
5.27.1.1	Minimum Needs	5-34
5.27.1.2	Contract Documentation	5-34
5.27.1.3	Contract Clauses	5-34
5.27.1.4	Software Standards	5-34
5.27.1.5	DD Form 1423	5-34
5.27.1.6	Software Package Information	5-34
5.27.2	Quality Assurance	5-35
5.27.3	Cost Estimates	5-35
5.28	NONDOMESTIC AND PROPRIETARY MATERIALS	5-35
Attach.	Notification of Demolition and Renovation	
Attach.	Elevator Design Technical Guidance	
Attach.	NCTC ltr, Subj: Communications Systems Cabling	
Attach.	NAVFAC ltr, Subj: Cathodic Protection	
Attach.	Facility Assessment - Antiterrorism/Force Protection	n
	Threat Questionnaire Cover Sheet & Questionnaire	
Attach.	United States Marine Corps Standards for Telephone	Switching
	Systems	
	- Inside Plant (ISP) Installation	
	- Outside Plant (OSP) Installation	
Attach.	Standards for Base Area Networks	

$\frac{\texttt{SECTION 6.} \quad \texttt{ENGINEERING STUDIES, MISCELLANEOUS CONTRACTS, SOILS}}{\texttt{INVESTIGATIONS AND FIELD SURVEYS}}$

Para.	6.1	GENERAL	6-1
	6.1.1	Safeguarding Safety and Health	6-1
	6.1.2	Engineering Studies Report Format	6-1
	6.2	SOIL MECHANICS AND SITE SEISMICITY	6-1
	6.2.1	Subsurface Investigation	6-2
	6.2.2	Boring Records	6-2
	6.2.3	Report	6-3
	6.2.4	Soil Testing and Earthwork Standards	6-3
	6.2.5	Foundation Design Recommendations	6-3
	6.2.6	Ground Motion Criteria	6-3
	6.2.6.1	Procedures	6-4
	6.2.7	Geochemical Evaluation	6-4

	6.2.8	Geotechnical Investigation	6-4
	6.2.8.1	Inspection	6-4
		x	
	6.2.9	Review and Final Submittal	6-4
	6.2.9.1		6-4
	6.2.9.1		6-5
	6.3	SURVEYS	6-5
	6.3.1	Field Surveys	6-5
	6.3.2	Topographic Surveys	6-5
	6.3.3	Maps and Survey Data	6-5
	6.4	FIELD INVESTIGATIONS	6-5
	6.5	COLOR RENDERINGS	6-6
	6.6	INTERIOR DESIGN SERVICES FOR FURNITURE AND	6-6
	0.0	FURNISHINGS PROCUREMENT	0 0
	6.6.1	Scope of Work	6-6
	6.6.2	Mandatory Procurement Sources	6-7
		-	
SECTION	ON 7. PR	OJECT DRAWINGS	
Para.	7.1	GENERAL	7-1
	7.2	60% DRAWINGS	7-1
	7.2.1	Civil	7-1
	7.2.1.1	Site Data	7-1
	7.2.1.2	-	7-1
	7.2.1.3	1 1	7-1
	7.2.1.4	±	7-1
	7.2.1.5	3 3	7-1
	7.2.1.6	Plan and Profiles	7-1
	7.2.2	Architectural	7-2
	7.2.2.1		7-2
	7.2.2.2		7-2
	7.2.2.3	Sections	7-2
	7.2.2.4		7-2 7-2
		Area Tabulation	
	7.2.2.6	Preliminary Furniture Layouts Embedment of Aluminum in Concrete	7-2
	7.2.2.7 7.2.3	Structural	7-2 7-2
	7.2.3.1	Structural Systems	7-2
	7.2.3.1	Explosives Safety	7-3
	7.2.3.2	Mechanical	7-3
	7.2.4	Equipment	7-3
	7.2.4.1	Systems	7-3
	7.2.4.2	Documentation	7-3
	7.2.4.3	Fire Protection	7-3
	7.2.5.1	Mechanical Systems	7-3
	7.2.5.1	Electrical Systems	7-3
	7.2.5.2	Miscellaneous	7-4
	7.2.5.3	Electrical	7-5
			, ,

	7.2.6.1	Power Source Connection Point	7-5 7-5
			_
	7.2.6.3	Equipment	7-5
	7.3	100% DRAWINGS	7-5
	7.3.1	Survey Control Profiles	7-5 7-6
	7.3.2		
	7.3.3	Loading	7-6
		xi	
	T 2 4		
	7.3.4	Basic Working Stresses	7-6
	7.3.5	Foundations	7-6
	7.3.6	Stress Diagrams	7-6
	7.3.7	Fallout Shelter Information	7-6
	7.4	FINAL DRAWINGS	7-6
	7.5	DRAWING SHEETS	7-6
	7.6	LETTERING	7-6
	7.7	SCALES	7-7
	7.7.1	Uniformity	7-7
	7.7.2	Graphic Scales	7-7
	7.7.3	English System	7-7
	7.7.4	SI (Metric System)	7-7
	7.7.5	Plot Plans and General Layouts	7-8
	7.7.6	Maps and Surveys	7-8
	7.8	USE OF PASTE-ONS AND STICK-ONS	7-9
	7.9	NAVFAC DRAWING NUMBERS	7-9
	7.10	PACNAVFACENGCOM SKETCH NUMBERS FOR IFB/RFP/SEI PACKAGES	
	7.11	CONSTRUCTION CONTRACT NUMBER AND SPECIFICATION NUMBER	7-9
	7.12	SHEET NUMBERS	7-9
	7.13	DESIGNATION OF TYPE OF DESIGN	7-9
	7.14	DRAWING REVISIONS	7-9
	7.14.1	Space for Revisions	7-9
	7.14.2	Revision Block Notations	7-9
	7.14.3	Formal Approval of Revised CADD Generated Drawings	7-10
	7.15	INDEX OF DRAWINGS	7-11
	7.16	ARRANGEMENT OF DRAWINGS	7-11
	7.17	DELINEATION OF NEW WORK	7-11
	7.18	DELINEATION OF BID ITEMS	7-11
	7.19	PROFESSIONAL REGISTRATION STAMP	7-11
	7.20	ENVIRONMENTAL DRAWINGS	7-12
	7.21	AMENDMENT TO ADD NEW DRAWINGS	7-12
	7.22	AMENDMENT TO ADD SKETCHES	7-12
SECTIO	N 8. PRO	DJECT SPECIFICATION	
Para	8.1	POLICY	8-1
Lara.	8.1.1		8-1
	J. 1. 1	1.01.01.01.00.0	0 1

8.1.2	Outline Specifications	8-1
8.1.2.1	VE Outline Specification	8-1
8.1.3	100% Specifications	8-2
8.1.3.1	Project Cover Sheet (A-E)	8-2
8.1.4	Final Specifications	8-2
8.1.4.1	Magnetic Media Requirement	8-2
8.1.4.2	Project Cover Sheet (A-E)	8-2
8.1.5	Coordination of Specifications and Drawings	8-2
8.1.5.1	Terminology Used in Drawings and	8-2
	Specifications	
8.1.5.2	Cross-Reference to Drawings	8-2
8.1.6	Cross-Referencing in Specifications	8-2
8.1.6.1	Cross-Referencing to Other Sections	8-3
8.1.6.2	Cross-Referencing to Articles and	8-3
	Paragraphs	
	xii	
8.1.7	Unrestricted Bidding	8-3
8.1.8	Proprietary Specifications	8-3
8.1.9	"Brand Name Or Equal" or "Product General Descrip-	8-4
	tion with Salient Characteristics (Without 'Or	
	Equal' Statement)	
8.1.10	Performance Specifications	8-4
8.1.11	Trade Names	8-4
8.1.12	Experience and Warranty Clauses	8-4
8.1.12.1	Experience Clauses	8-4
8.1.12.2	Warranty Clauses	8-5
8.2	AVAILABLE SPECIFICATIONS	8-5
8.2.1	NFGS	8-5
8.2.1.1	Tailoring	8-6
8.2.1.2	Combining Guide Specifications	8-6
8.2.2	EFD Regional Guide Specifications	8-6
8.2.3	Valid Guide Specifications	8-6
8.2.4	Department of Defense Guide Specifications	8-6
	for Military Family Housing	
8.2.5	Standard (S-Series) Specifications	8-6
8.2.6	Other Specifications	8-7
8.2.6.1	Technical Society Specifications	8-7
8.2.6.2	Trade Association Specifications	8-7
8.2.6.3	Manufacturer Specifications	8-7
8.2.6.4	Federal Specifications	8-7
8.2.6.5	Military Specifications	8-7
8.2.6.6	Commerical Item Description (CIDs)	8-7
8.3	ORGANIZATION	8-7
8.4	PRINT	8-7
8.5	SPECIFICATION NUMBER	8-7
8.6	PAGE LAYOUT	8-8
8.7	SECTION FORMAT	8-8
8.7.1	Section Numbering and Titling	8-8
		_

8.7.2	Part and Subpart Numbering	8-8
8.7.3	Footing and Paging	8-8
8.7.4	Header	8-8
8.7.5	Section Arrangement	8-8
8.8	SKETCHES	8-9
8.9	PRIORITY OF REFERENCE SPECIFICATIONS	8-9
8.10	GENERAL RULES FOR REFERENCES	8-9
8.11	LANGUAGE	8-11
8.11.1	Description of Work	8-11
8.11.2	Imperative Mood	8-11
8.11.3	Articles	8-11
8.11.4	Subject/Verb Agreement	8-11
8.11.5	Strong Verbs	8-11
8.11.6	Parallel Construction	8-11
8.11.7	Prepositional Phrases	8-11
8.11.8	Repetition	8-12
8.11.9	Listing Multiple Requirements	8-12
8.11.10	Pronouns	8-12
8.12	PHRASEOLOGY	8-12
8.12.1	Contract Clause and Division I Requirements	8-12
8.12.2	Open-Ended Requirements	8-13
8.12.3	Indeterminate Words and Phrases	8-13
	xiii	
8.12.4	Limitation	8-14
8.13	VOCABULARY	8-14
8.13.1	Misused Words	8-15
8.13.2	Words Having Varied or Indefinite Meanings	8-15
8.13.3	Compound Words	8-15
8.13.4	Naval Jargon	8-15
8.14	WORD STREAMLINING	8-16
8.15	CAPITALIZATION, SPELLING, COMPOUND WORDS,	8-16
	PUNCTUATION	
8.15.1	Commonly Confused Spellings	8-16
8.15.2	Hyphenated Compounds	8-16
8.16	UNDERLINING AND CAPITALIZING FOR EMPHASIS	8-16
8.17	CAPITALIZATION OF CERTAIN TERMS	8-16
8.18	FOOTNOTES	8-16
8.19	EXPONENTS, SUBSCRIPTS, AND SUPERSCRIPTS	8-16
8.20	NUMBERS	8-16
8.21	DECIMALS AND FRACTIONS	8-16
8.22	SYMBOLS, ABBREVIATIONS, AND ACRONYMS	8-17
8.22.1	Symbols	8-17
8.22.2	Abbreviations	8-17
8.22.3	Acronyms	8-17
8.23	FORMS	8-17
8.24	REFERENCING MILITARY HANDBOOKS	8-17
8.25	SAFETY AND HEALTH REQUIREMENTS	8-17
8.26	CONTRACTUAL ISSUES	8-17

8.26.1	Parties to the Contract	8-17
8.26.2	Conflicts with the Contract Clauses	8-17
8.26.3	Coordination with Construction Contract	8-18
	Clauses (Appendix V)	
8.26.4	Contractor Direction	8-19
8.27 BID	ITEMS	8-19
8.27.1	Bid Item I (Base Bid)	8-19
8.27.2	Bid Items	8-20
8.27.3	Bidding Information	8-20
8.27.4	Unit Price Bid Items	8-20
8.28 CONT	FRACT CHANGES	8-20
8.28.1	Amendment before Award	8-20
8.28.2	Amendment after Award	8-20
8.28.3	Cost Estimate	8-20
8.28.4	Quality and Time	8-20
8.28.5	Sequence of Corrections	8-21
8.28.6	Specifications Changes	8-21
8.28.6.1	To Add a Word(s)	8-21
8.28.6.2	To Delete a Word(s)	8-21
8.28.6.3	To Change a Word(s)	8-21
8.28.6.4	To Add a Sentence(s)	8-21
8.28.6.5	To Delete a Sentence(s)	8-21
8.28.6.6	To Change a Sentence(s)	8-21
8.28.6.7	To Add a Paragraph(s) or	8-22
	Subparagraph(s)	
8.28.6.8	Deleting a Paragraph(s) or	8-22
	Subparagraph(s)	
8.28.6.9	Revising a paragraph(s) or	8-22
	Subparagraph(s)	
	xiv	
8.28.6.10	Adding a Section(s)	8-22
8.28.6.11	Deleting a Section(s)	8-23
8.28.6.12	Replacing or Adding Pages	8-23
8.28.7	Drawing/Sketch Changes	8-23
8.28.7.1	Adding Drawings	8-23
8.28.7.2	Deleting Drawing(s)	8-24
8.28.7.3	Deleting and Adding New Drawing(s)	8-24
8.28.7.4	To Substitute a Complete List of	8-24
	Drawings	
8.28.7.5	Revising Drawings(s)	8-24
8.28.7.6	Adding Sketch(es)	8-25
8.28.7.7	Written Changes to Drawing(s)	8-25
8.28.8	To Cancel an Amendment	8-26
8.29 NONG	COMMERCIAL SOFTWARE	8-26
	FORM 1423 INSTRUCTIONS	8-26
Attach. Samp	ple A-E Cover Sheet	
Attach. Pro	ject Information Form Required for 100% and Final	
Si	ubmittals	

Attach. Sample Bid Schedules (4 sheets)

SECTION 9. COST ENGINEERING

Para.	9.1	INTRODUCTION	9-1
rara.	9.1.1	Instructions and Exhibits	9-1
	9.1.2	Clarification	9-1
	9.1.3	Disclosure of Government Estimate (GE)	9-1
	9.2	OBJECTIVE	9-1
	9.3	GENERAL REQUIREMENTS	9-1
	9.3.1	Preparer	9-1
	9.3.2	Metric	9-1
	9.3.3	Work Breakdown Structure (WBS)	9-1
	9.3.4	Computer Generated Estimates	9-1
	9.3.5	Printed	9-1
	9.3.6	Multiple Types of Work	9-1
	9.3.7	Multiple Facilities with Multiple Types of Work	9-2
	9.3.8	Multiple Projects	9-2
	9.3.9	Air Force Projects	9-3
	9.3.10	Level of Detail	9-3
	9.3.10.1		9-3
	9.3.10.2	~ -	9-3
	9.3.11	Pricing	9-3
	9.3.12	Escalation	9-3
	9.3.13	Bid Items	9-4
	9.4	SUBMISSION REQUIREMENTS	9-4
	9.4.1	Basis of Estimate	9-4
	9.4.2	DD 1391 Plus Submission	9-4
	9.4.3 9.4.4	Parametric Cost Estimate (PCE) Submission	9-4 9-5
	9.4.4	Schematic Design Submission 60% Submission	9-5
	9.4.5	100% Submission	9-5
	9.4.7	Final Submission	9-5
	9.4.8	Amendment Estimates	9-6
	9.4.9	Bid Analysis	9-6
	J. 1. J	214 11141/010	<i>y</i> 0
		xv	
	9.4.10	Contract Modification Estimates	9-6
	9.5	INTERNATIONAL BALANCE OF PAYMENTS (IBOP) SUMMARY	9-7
	Exhibits	A through J	
SECTIO	ON 10. SF	PECIAL REQUIREMENTS FOR OVERSEAS WORK	
Dara			10-1
Para.	10.1 10.2	GENERAL SOURCES OF INFORMATION	10-1
	10.2	PDE and PACNAVFACENGCOM Consultants	10-1
	10.2.1	OTCC OTC/OTCC DFT and POTCC	10-1

10.2.3	Local Organizations and Agencies	10-1
10.3	SPECIAL REQUIREMENTS	10-1
10.3.1	Local Materials	10-1
10.3.2	Local Construction Methods and Equipment	10-1
10.3.3	Local Criteria	10-1
10.3.4	Local Labor	10-1
10.3.5	Availability of Transportation	10-1
10.3.6	Entry Pass Requirements	10-2
10.3.7	Cost Engineering	10-2
10.3.8	Rainfall Data	10-2
10.3.9	Local Mensuration System	10-2
10.4	MEETING TO DISCUSS ABOVE INFORMATION	10-2
10.4.1	Design Submittal Review	10-2
10.4.2	Post Construction Award Services (PCAS)	10-2
10.4.3	Submittals for Review	10-2
10.5	DEFENSE BASE ACT (DBA) INSURANCE	10-2

APPENDICES

- A. SF 254, Architect-Engineer and Related Services Questionnaire SF 255, Architect-Engineer and Related Services Questionnaire for Specific Project
- B. Contract Award Documents
 - SF 252, Architect-Engineer Contract
 - A-E Contract Clauses
- C. CADD Deliverables
- D. DD 2631, Architect-Engineer Performance Evaluation
- E. Construction Criteria Base
 List of NAVFAC Design Manuals/Military Handbooks
- F. AF Design for Maintainability AF - Interior Design Presentation Format
- G. Instructions for Obtaining Entry Passes to Military Reservations
- H. Payment Forms
 - NAVFAC Form 7300/41, Contractor's Invoice
 - PH-PACDIV Form 4-4280/8, Contract Performance Statement
 - SF 30, Amendment of Solicitation/Modification of Contract
 - Form 4330/7, Contractor's Release
- I. A-E Design Quality Control System
 - PACNAVFACENGCOM Design Review Checklist
 - PACNAVFACENGCOM REDICHECK Coordination Review Checklist
 - PH-PACDIV FORM 10-11012/4, PACDIV REVIEW COMMENTS
- J. Submittals
 - Submittal Register Instructions
 - Submittal Register (SPECSINTACT w/SGML)
 - Critical Items Summary
 - Recommended Field Consultation
- K. Transmittal Letters
 - Security Officer
 - Activity
 - ROICC
 - Shipyard
 - Industrial Hygiene
- L. Construction Contractor Submittals
 - PH-OICC MIDPAC Form 4330/62, Transmittal/Review/Approval
 - Submittal Flow Chart
- M. Energy Conservation
 - Attachment A. Energy Conservation Techniques
 - Attachment B. Guidance for Preparation of Computer Energy Analysis

- Attachment C. NAVFAC Design Policy Letter DPL-09B-0002 of 21 May 92, Energy Efficient Electrical Products

xvi

APPENDICES (Cont'd)

- Attachment D. NAVFAC ltr 11300 EICO/tjh of 29 May 02, ITG FY02-02, Interim Technical Guidance, "Energy Conservation Criteria Using ASHRAE Standard 90.1 of 1999"
- N. PACNAVFACENGCOM Fire Protection Policies, Instruction and Guideline
 - Attachment A. PACNAVFACENGCOM Code 408 Branch Policies
 - Attachment B. PACNAVFACENGCOM Instruction 11320.9, Fire Protection Design Analysis
 - Attachment C. NAVFACENGCOM Design Policy Letter Elevator Hoistways
- O. NAVFACENGCOM Roofing Design Criteria
- P. Construction Quality Management
- Q. Sample Boring Log
- R. Drawing Size, Title Block and Revision Block
 - Figure 1. Standard Drawing Sheet Size
 - Figure 2. Sample Half Size Drawing Sheet Size
 - Figure 3. Sample Title Block and Revision Block
 - Figure 4. Sample Vertical Title Block
 - Figure 5. Title Sheet (Sample Bid Items)
 - Figure 6. Drawing Sheet (Sample Bid Item)
- S. Graphic Scales
 - Figure 1. Graphic Scales Architectural Type
 - Figure 2. Graphic Scales Engineering Type
 - Figure 3. Metric Graphic Scales
- T. Outline Specifications
 SAMPLE SPECIFICATION PAGE LAYOUT
- U. Amendments
 - Amendment Before Award
 - Amendment After Award
 - Amendment Design Build After Award
 - Amendment Sketch Form
- V. Construction Contract Clauses
- W. Metric (SI) Conversions
- X. Design Guidance for Electrical Power Systems Serving Nonlinear Harmonic Loads
 - Attachment A. NAVFAC Design Policy Letter DPL-92-0001 of 27 Jan 92
- Y. Encl (1) Sample Design/Build IFB Specifications Project Package Encl (2) Sample Design/Build RFP Format Specifications Project

Package

Sample - Construction Contractor's A-E Cover Sheet for Design/Build RFP Projects

Encl (3) IFB Specifications Navy Table of Contents

xvii

Encl (4) Sample - IFB Specifications Project Package Sample - A-E Cover Sheet

Z. Sustainability

- Attachment A. Guidance Documents
- Attachment B. Case Study
- Attachment C. Sample Waiver of NAVFAC's Affirmative Procurement Program

